



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,465	11/20/2003	Sebastien Josset	29250P-000031/US	6840
36594 7590 12/20/2010 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
EXAMINER				
SHEPPERD, ERIC W				
ART UNIT		PAPER NUMBER		
2492				
MAIL DATE		DELIVERY MODE		
12/20/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/716,465

Applicant(s)

JOSSET ET AL.

Examiner

ERIC W. SHEPPERD

Art Unit

2492

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 October 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-040)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-13 and 16-20 are pending.

Response to Amendment

2. In response the amendment filed 10/04/2010: Applicant has amended the claims, and the corresponding rejections have been altered to address the amended language.

Response to Arguments

3. Applicant's arguments filed 10/04/2010 have been fully considered but they are not persuasive.
4. Applicant argues that Jorgensen does not disclose "a terminal of said plurality of communication terminals including, a core associated with an operation system of said terminal and configured to store information associated with said streams of application data".
5. Examiner respectfully disagrees. Examiner relied upon Jorgensen to show a *quality of service (QoS) device* ("Subscriber CPE Station" Fig. 3B item 294d; column 67 lines 44-47 *IP Flow analyzer 632 in a subscriber CPE station 294d desiring uplink reservation with base station 302*) including, a core associated with an operating system of said *QoS device* ("Source Application Packet Header Data table" Fig. 16A item 1628 *data storage for application information necessitating operating system management, i.e. "Windows"* Jorgensen column 46 lines 1-6) and configured to store information

associated with said streams of application data (Jorgensen column 45 lines 16-18 *data streams*). Examiner further relied upon Bloebaum to show a QoS *device* as a terminal ("Mobile Terminal" Fig. 2, item 100). The motivation to combine the two references being that it would provide greater user control over desired quality of service by allowing a terminal to specify the type of QoS versus QoS being assigned by another device along the connection (Jorgensen column 67 lines 40-44 *functionality of flow analyzer separated from base station*). Most, if not all computer devices, require some form of operating system in order to function, and as such the customer premise equipment of Jorgensen addresses the need for an operating system and a core. The association of the operating system and core with the terminal is met by the combination of Bloebaum which moves the QoS functionality of Jorgensen to the mobile terminal of Bloebaum.

6. Applicant argues that Jorgensen does not teach or fairly suggest a controller configured to "deliver configuration data to at least one of the plurality of communication stations, the configuration data being associated with the service data, the configuration data configured to enable the at least one communication station to one of modify and establish a communicative link to the terminal such that the communicative link supports at least one requirement associated with the application".

7. Examiner respectfully disagrees. First, during patent examination, the claims are given the broadest reasonable interpretation consistent with the specification. See *In re Morris*, 127 F.3d 1048, 44 USPQ2d 1023 (Fed. Cir. 1997). See MPEP § 2111 - § 2116.01 for case law pertinent to claim analysis. In this case, the examiner is giving the

term "controller" the broadest reasonable interpretation. Examiner is interpreting the "controller" as an interface that is configured to "receive service data" and "deliver configuration data". As such, the wireless interface of Jorgensen (Jorgensen Fig. 3B item 292d; column 40 lines 30-31 *wireless transceiver antennae*) part of the CPE station reads upon the "controller" in claim 1. The wireless transceiver antennae receives service data and configuration data from the IP flow analyzer of the CPE station, and transmits both to the IP flow scheduler of the wireless base station to configure the connection (Jorgensen column 67 lines 47-53 *classification of the IP flow (configuration data) is sent with IP flow identifier and number of packets (service data) in a reservation request block to wireless base station 302 for uplink QoS scheduling*).

8. All other arguments presented by Applicant either re-hash or rely upon the issues addressed above or in prior actions, and are also not persuasive for the reasons given above.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Claim 13 line 1 recites the limitation "said process" which lacks proper antecedent basis. For purposes of applying prior art the limitation has been construed

as "said requirement".

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-5, 7-10, 12-13 and 16- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen (US 6,590,885 B1), in view of Bloebaum (US 6,535,815 B2).

14. As to claim 1, Jorgensen substantially discloses a system for controlling processes associated with streams of application data for a communication network including a plurality of communication stations configured to exchange data streams and connected to a plurality of communication terminals ("Client" Jorgensen Fig. 2D, item 120d-e *connected to* "Wireless Base Station", item 302 *through* "CPE Subscriber Station", item 294d-e) provided with at least one application ("The RSVP protocol can be used by a host, on behalf of an application, to request a specific QoS from the network for particular data streams or flows." Jorgensen column 45 lines 16-18), the system for controlling processes comprising:

a quality of service (QoS) device ("Subscriber CPE Station" Fig. 3B item 294d; column 67 lines 44-47 *IP Flow analyzer 632 in a subscriber CPE station 294d desiring*

uplink reservation with base station 302) including,

a core associated with an operating system of said *QoS device* ("Source Application Packet Header Data table" Fig. 16A item 1628 *data storage for application information necessitating operating system management, i.e. "Windows"* Jorgensen column 46 lines 1-6) and configured to store information associated with said streams of application data (Jorgensen column 45 lines 16-18 *data streams*);

a first module associated with said *QoS device* ("Packet Characterization" Jorgensen Fig. 16A, item 1604 *and* "Packet Classification", item 1606 *and* "IP-Flow Presentation", item 1608) and configured to

receive a message designating an application ("If the IP flow is new, control passes to module 1632 from module 1624 of the packet header identification component 1602" Jorgensen column 69 lines 34-36), and

deliver service data representative of at least one process associated with said designated application ("IP flow presentation component 1608 prepares and presents the IP data flow packets to flow scheduler 634" column 70 lines 19-20 *and* Jorgensen Fig.16A, item 1650 "Provide IP-Flow QoS-Class to Frame Scheduler");

a second module associated with said *QoS device* ("Packet Header Identification" Jorgensen Fig. 16A, item 1602) and configured to

receive a stream of data sent by a terminal ("A stream of packets ... is received at packet header identification component 1602" Jorgensen column 68 lines 42-46),

access the core to determine the application associated with said received

stream ("Packet header analysis module determines from source application packet header table the type of source application making the IP flow" Jorgensen column 69 lines 5-7), and

deliver said message to said first module based on said determined application ("If the IP flow is a new IP flow, then the identification information about the new IP flow is added to table 1626, and control passes from analysis module 1624 to module 1632 of the packet characterization component 1604" Jorgensen column 69 lines 13-17); and

a controller associated with said QoS device (Jorgensen Fig. 3B item 292d; column 40 lines 30-31 *wireless transceiver antennae*) and configured to,

receive service data delivered by said first module (Jorgensen column 67 lines 47-53 *IP flow identifier and number of packets (service data) are sent to uplink flow scheduler 634 in wireless base station 302 from IP flow analyzer 632 in subscriber CPE station 294d via wireless antennae 292d*), and

deliver configuration data to at least one of the plurality of communication stations (Jorgensen "Wireless Base Station" Fig. 3B item 302), the configuration data being associated with the service data, the configuration data configured to enable the at least one communication station to one of modify and establish a communicative link such that the communicative link supports at least one requirement associated with the application (Jorgensen column 67 lines 47-53 *classification of the IP flow (configuration data) is sent with IP flow identifier and number of packets (service data) in a reservation request block to wireless base station 302 for uplink QoS scheduling*).

Jorgensen fails to explicitly show a *QoS device* as a terminal.

Bloebaum describes a method by which a mobile terminal equipped with a GPS receiver can optimize time for estimating its current position based on one or more quality of service (QoS) parameters.

With this in mind, Bloebaum discloses a *QoS device* as a terminal ("Mobile Terminal" Fig. 2, item 100). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to implement the functionality of the "Uplink IP Flow Analyzer" Fig. 16A item 632 of Jorgensen in the QoS enabled terminal of Bloebaum as it would provide greater user control over desired quality of service by allowing a terminal to specify the type of QoS versus QoS being assigned by another device along the connection (Jorgensen column 67 lines 40-44 *functionality of flow analyzer separated from base station*).

15. As to claim 2, the above combination of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 1, including wherein

said core includes an interface ("Microprocessor" Bloebaum Fig. 2, item 116 *connected to* "RAM" item 120) for real time control of the data streams associated with said at least one application ("microprocessor determines a desired quality of service (QoS)" Bloebaum column 5 lines 31-33), and

said second module is configured to access said interface to determine the application associated with said received stream ("microprocessor could automatically utilize a default QoS value, which the user has previously chosen for a particular

application and stored in data memory 120" Bloebaum column 5 lines 36-40), upon receiving a data stream ("a positioning application ... request a position update from the mobile terminal" Bloebaum column 5 lines 26-29).

16. As to claim 3, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 1, including further comprising:

memory configured to store a table of correspondences between said application and said service data ("IP-Flow QoS Requirement Table" Jorgensen Fig. 16A, item 1634), wherein said first module is configured to access said memory means to determine service data stored in correspondence with said designated application, upon receiving a message designating an application ("in IP flow QoS requirements lookup module 1632 the QoS requirements for the application associated with the IP flow are determined. Module 1632 performs this operation by looking up the application in IP flow QoS requirement table 1634" Jorgensen column 69 lines 38-42).

17. As to claim 4, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 3, including wherein

said first module is configured to send a user via a graphical interface of the communication terminal a message requesting said service data associated with the designated application, if service data corresponding to the designated application is not stored in said memory ("Keypad 122 and display 124 provide a user interface allowing the user to interact with the mobile terminal 100" Bloebaum column 5 lines 21-22; and

"microprocessor 116 may, ... prompt the user with a menu of choices related to desired positioning quality of service (QoS)" Bloebaum column 5 lines 31-33).

18. As to claim 5, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 3, including wherein said second module is configured to update said correspondence table based on information received from the terminal ("a default QoS value, for which the user has previously chosen for a particular application and stored in data memory" Bloebaum column 5 lines 37-40).

19. As to claim 7, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 5, including wherein said information received is delivered by a graphical interface of the terminal ("To make this determination of QoS, microprocessor 116 may, ... prompt the user with a menu of choices related to desired positioning quality of service (QoS)" Bloebaum column 5 lines 31-33).

20. As to claim 8, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 1, including wherein second module is installed in a protocol stack of said core ("the information about the IP streams is communicated 'vertically' in the protocol stack model from the application layer (i.e. OSI level 7) to the PRIMMA MAC layer (i.e. OSI level 2) for bandwidth reservation and

application switching purposes" Jorgensen column 22 lines 20-25).

21. As to claim 9, the above combined art of Jorgensen and Bloebaum discloses the invention as claimed as described in claim 1, including wherein at least one of said communication stations includes at least one protocol stack arranged in layers, including a MAC layer, and said controller is configured to deliver configuration data for configuring said MAC layer as a function of the requirements associated with a stream to be transmitted or received, upon receiving service data ("Once the nature and QoS requirements of each IP stream are determined by other portions of the system, this information is communicated to the PRIMMA MAC layer so that the IP flows of each application can be switched to appropriate destinations in a proper priority order" Jorgensen column 22 lines 8-12 and "Module 1662 informs MAC uplink subframe scheduler 1666 of the reservation" Jorgensen column 71 lines 31-33).

22. As to claim 10, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 1, including wherein said first module is configured to deliver to said controller service data representative of at least one process associated with streams to be received from an application installed in a remote communication terminal ("Provide IP-Flow QoS-Class to Frame Scheduler" Jorgensen Fig. 16A, item 1650 *delivered to* "Subscriber WorkStation" Fig. 16B).

23. As to claim 12, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 1, including wherein said first module and said controller are configured to exchange service messages containing said service data in accordance with an exchange protocol chosen from at least one of a proprietary protocol (*not required*), the SNMP ("simple network management protocol (SNMP)" Jorgensen column 47 lines 62-63), the XML protocol (*not required*), and the RSVP ("The present invention supports RSVP by providing ... recognition and support of RSVP messages, including: Path messages, Reservation (Resv), Path teardown messages, Resv teardown messages, Path error messages, Resv error messages, and Confirmation messages" Jorgensen column 43 lines 44-49).

24. As to claim 13, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 1, including wherein said requirement is chosen from a group including at least one of quality of service ("a resource allocation means optimizing end-user quality of service (QoS)" Jorgensen column 3 lines 50-51), encryption (*not required*), authentication (*not required*), session set-up (*not required*), stream prioritization (*not required*), and stream elimination (*not required*).

25. As to claim 16, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 1, including a communication station including said controller of a control system as claimed in claim 1 (Jorgensen "Wireless

Base Station" Fig. 3B item 302 with item 290d *wireless antennae*).

26. As to claim 17, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 16, including the communication station taking the form of a satellite terminal (Jorgensen "such as, e.g., RF communication, cable RF, and satellite link, to antenna 290d of wireless base station 302" columns 82 lines 1-3).

27. As to claim 18, the above combined art of Jorgensen and Bloebaum disclose the invention as claimed as described in claim 1, including a communication network including said plurality of communication stations ("Wireless Base Station" Jorgensen Fig. 2D item 302; *and multiple "base stations" Bloebaum Fig. 1, item 12 obvious to one of ordinary skill in the art*) and said plurality of communication terminals ("Client" Jorgensen Fig. 2D, item 120d-e *connected to "Wireless Base Station", item 302 through "CPE Subscriber Station", item 294d-e*).

28. As to claim 19, the above combined art of Jorgensen and Bloebaum discloses the invention as claimed as described in claim 18, including the communication network, chosen in a group including at least satellite networks and wireless networks ("such as, e.g., RF communication, cable RF, and satellite link, to antenna 290d of wireless base station 302" Jorgensen columns 82 lines 1-3).

29. As to claim 20, the above combined art of Jorgensen and Bloebaum discloses the invention as claimed as described in claim 1, including wherein the terminal includes a processor (Bloebaum "Microprocessor" Fig. 2 item 116),

the first module includes code segments configured to perform the functions of the first module when executed by the processor (Jorgensen column 67 lines 26-33 *software/hardware modules*), and

the second module includes code segments configured to perform the functions of the second module when executed by the processor (Jorgensen column 67 lines 26-33 *software/hardware modules*).

30. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen (US 6,590,885 B1), in view of Bloebaum (US 6,535,815 B2), in view of Reichmeyer et al (US 6,286,038 B1).

31. As to claim 6, the above combined art of Jorgensen and Bloebaum substantially disclose the invention as claimed as described in claim 5, failing, however, to explicitly include wherein said information received is contained in a configuration file received by the terminal.

Reichmeyer describes a method of remotely configuring a network device by propagating information to the network device from a configuration server.

With this in mind, Reichmeyer discloses wherein said information received is contained in a configuration file received by the terminal ("the central configuration

server 26 then propagates configuration information in the form of a ... Domain Configuration File (DCF) ... DCF may include differentiated services and QoS parameters" Reichmeyer columns 10-11 lines 54-2). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to combine the remote configuration method of Reichmeyer with the QoS system of Jorgensen and Bloebaum as it would advantageously speed up and simplify the configuration process by removing the necessity of reconfiguring every terminal locally upon initiation (Reichmeyer column 1 lines 13-22).

32. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jorgensen (US 6,590,885 B1), in view of Bloebaum (US 6,535,815 B2), in view of Amin et al (US 6,854,014 B1).

33. As to claim 11, the above combined art of Jorgensen and Bloebaum substantially discloses the invention as claimed as described in claim 1, failing, however, to explicitly include wherein said controller receives an authorization delivered by a central server.

Amin describes a method of a user communicating in an IP centric distributed network that uses servicing to establish network resources for establishment of connections.

With this in mind, Amin discloses wherein said controller receives an authorization delivered by a central server ("The allied Service Application Server sends an Authorization Request message to the AAA server to authorize the service, QoS,

and bandwidth requested" Amin column 14 lines 48-50 and "When the request is authorized, the Authorization Server sends the Authorization Response to the allied Service Application Server" Amin column 14 lines 56-58). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to combine the QoS authorization of Amin with the QoS system of Jorgensen and Bloebaum as it provides the advantage of increasing control over a limited amount of resources to ensure that they are allocated as desired (Amin column 1 lines 45-59).

Conclusion

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

35. Raisanen et al (US 6,633,540 B1) describes a real-time traffic shaper for end-to-end QoS based on different types of applications (see Fig. 10).

36. Lin et al (US 6,804,222 B1) describes in-band signaling with end-to-end QoS messages for applications with frame classifiers attached.

37. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC W. SHEPPERD whose telephone number is (571)270-5654. The examiner can normally be reached on Monday - Thursday, Alt. Friday, 7:30 AM - 5PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (571)272-6776. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/716,465
Art Unit: 2492

Page 18

/E. W. S./
Examiner, Art Unit 2492

/Philip J Chea/
Primary Examiner, Art Unit 2492